STIC Search Report
EIC 1700

STIC Database Tracking Number: 122926

TO: Veronica Faison
Location: REM 9D28
Art Unit : 1755
May 27, 2004

Case Serial Number: 10/606705

From: Kathleen Fuller
Location: EIC 1700
REMSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov

Search Notes

STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher or contact:*

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example: 1713*
- *Relevant prior art* ***found****, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
  (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art* ***not found:***
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28

=> FILE REG
FILE 'REGISTRY' ENTERED AT 11:25:33 ON 27 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 MAY 2004 HIGHEST RN 686262-86-2
DICTIONARY FILE UPDATES: 26 MAY 2004 HIGHEST RN 686262-86-2

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

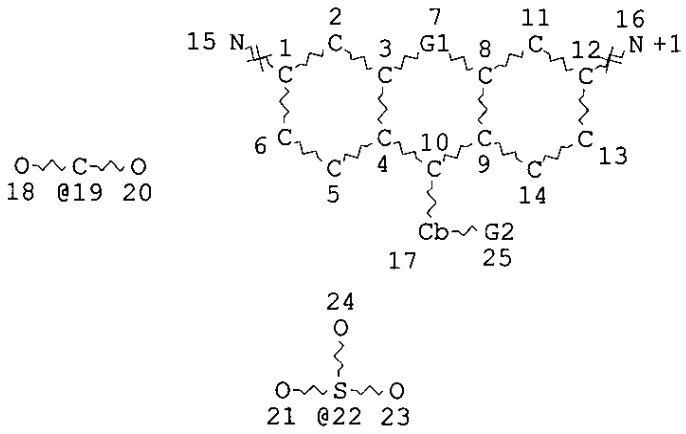
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 11:25:40 ON 27 MAY 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 27 May 2004 VOL 140 ISS 22
FILE LAST UPDATED: 26 May 2004 (20040526/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L8
L3 STR



43 structures from the query

VAR G1=C/O/S/N
VAR G2=19/22
NODE ATTRIBUTES:
CHARGE IS E+1 AT 16
NSPEC IS RC AT 15
NSPEC IS RC AT 16
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY UNS AT 17
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE
L5 43 SEA FILE=REGISTRY SSS FUL L3
L6 2 SEA FILE=REGISTRY ABB=ON L5 AND 1-5/M
L8 1 SEA FILE=HCAPLUS ABB=ON L6

1 CA reference with metals

=> D L8 ALL HITSTR

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:58374 HCAPLUS
DN 138:129079
ED Entered STN: 24 Jan 2003
TI Fast-writable and precision-writable high-capacity optical storage media
IN Lehmann, Urs; Aeschlimann, Peter; Sutter, Peter; Schmidhalter, Beat; Budry, Jean-Luc; Spahni, Heinz
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
IC G11B007-24; C07C251-20; C07D231-38; C09B011-02; C09D011-18; C09B011-18; C09B011-28
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2003007296 A1 20030123 WO 2002-EP7434 20020704
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1412942 A1 20040428 EP 2002-764629 20020704
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
PRAI CH 2001-1297 A 20010713
CH 2001-1516 A 20010817
WO 2002-EP7434 W 20020704
OS MARPAT 138:129079
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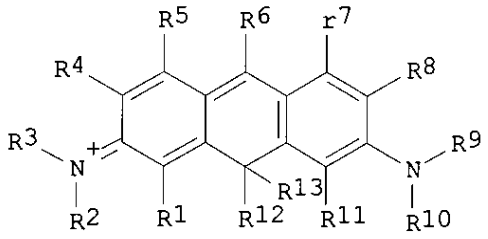

I

AB The invention relates to an optical recording medium, comprising a substrate and a recording layer, wherein the recording layer comprises a compound of I (R1-13 = H, C1-24 alkyl, C2-24 alkenyl, alkynyl, C3-24 cycloalkyl, alkenyl, C7-24 aralkyl, aryl, C4-12 heteroaryl, etc.; Xm- = inorg., organic, organometallic anion; Yn+ = proton or a metal, ammonium or phosphonium cation; m, n = 1-5; p, q = 0.2-6). Generally the optical recording medium according to the invention addnl. comprises a reflecting layer. The recording media according to the invention exhibit high sensitivity and good playback characteristics, especially at high recording and playback speeds. The light stability is also excellent.

ST optical recording storage media fast writable precision high capacity
IT Optical recording materials
(fast-writable and precision-writable high-capacity optical storage media)
IT 103-69-5, N-Ethylaniline 110-91-8, Morpholine, reactions 459-57-4, 4-Fluorobenzaldehyde 17717-41-8 32364-65-1 35843-88-0, 3-Isopropenyl-N,N-dimethylaniline 68448-44-2 199605-85-1 489437-93-6 489437-94-7 489437-95-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(fast-writable and precision-writable high-capacity optical storage media)
IT 1204-86-0P 489437-96-9P 489437-97-0P 489437-98-1P 489437-99-2P 489438-01-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(fast-writable and precision-writable high-capacity optical storage media)

IT 489461-37-2P 489461-38-3P 489461-39-4P **489461-40-7P**
489461-41-8P 489461-42-9P 489461-43-0P 489461-44-1P
489461-45-2P 489461-46-3P 489461-47-4P 489461-49-6P 489473-93-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fast-writable and precision-writable high-capacity optical storage media)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Anon; PATENT ABSTRACTS OF JAPAN 1998, V1998(01)
(2) Canon; EP 0295145 A 1988
(3) Drexhage; DE 19919119 A 2000 HCAPLUS
(4) Drexhage, K; US 3781711 A 1973 HCAPLUS
(5) Hitachi; JP 09226250 A 1997 HCAPLUS
(6) Inoue, A; US 5301145 A 1994
(7) Wolleb, H; US 5851621 A 1998

IT **489461-40-7P 489461-41-8P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fast-writable and precision-writable high-capacity optical storage media)

RN 489461-40-7 HCAPLUS

CN Methanaminium, N-[10-(2-carboxyphenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl-, inner salt, bis[3-[[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]azo-κN1]-4-(hydroxy-κO)-N-[3-(1-methylethoxy)propyl]benzenesulfonamidato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

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CRN 489437-94-7
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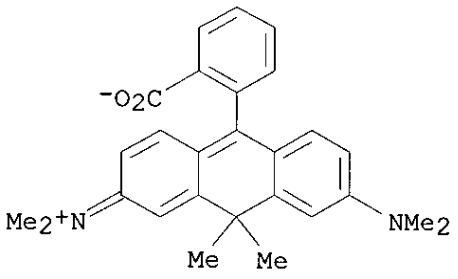

CM 2

CRN 68448-44-2
CMF C44 H50 Co N10 O10 S2
CCI CCS

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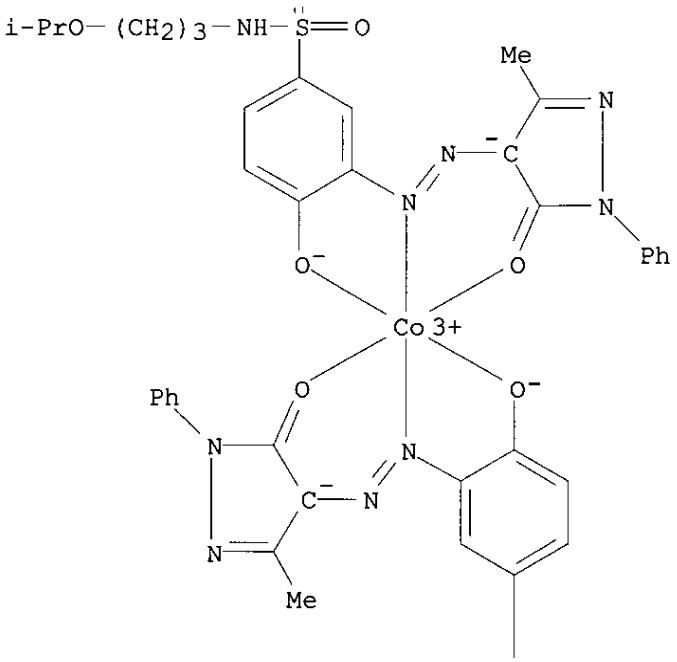

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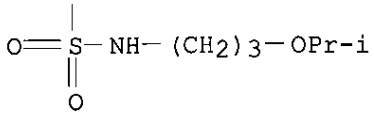

RN 489461-41-8 HCAPLUS
CN Methanaminium, N-[10-[2-carboxy-4-(dimethylamino)phenyl]-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl-, inner salt, bis[3-[[4,5-dihydro-3-methyl-5-(oxo-κO)-1-phenyl-1H-pyrazol-4-yl]azo-κN1]-4-(hydroxy-κO)-N-[3-(1-methylethoxy)propyl]benzenesulfonamidato(2-)]cobaltate(1-) (9CI) (CA INDEX NAME)

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CRN 489437-95-8
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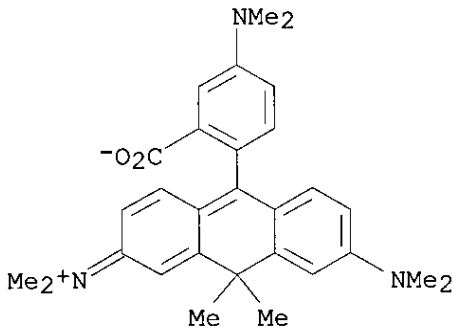
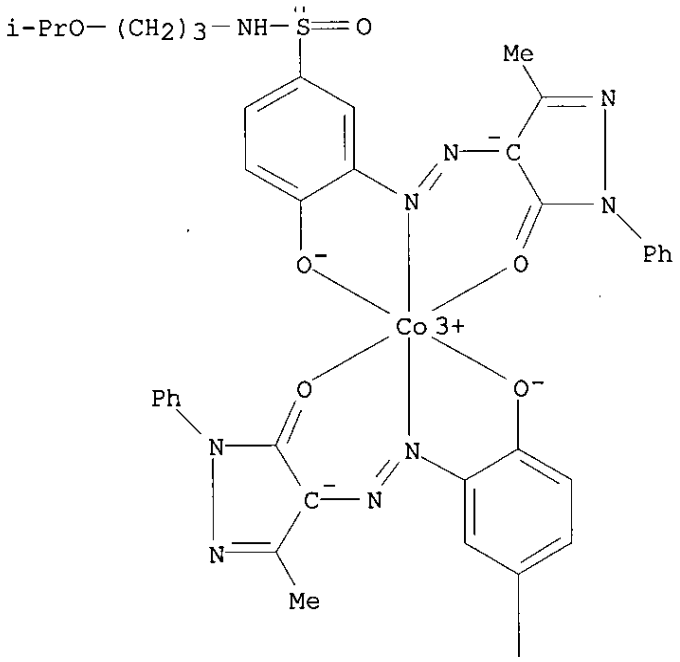


CM 2

CRN 68448-44-2
CMF C44 H50 Co N10 O10 S2
CCI CCS

PAGE 1-A

PAGE 2-A



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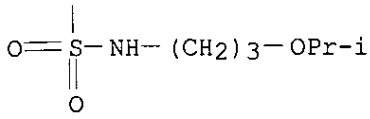

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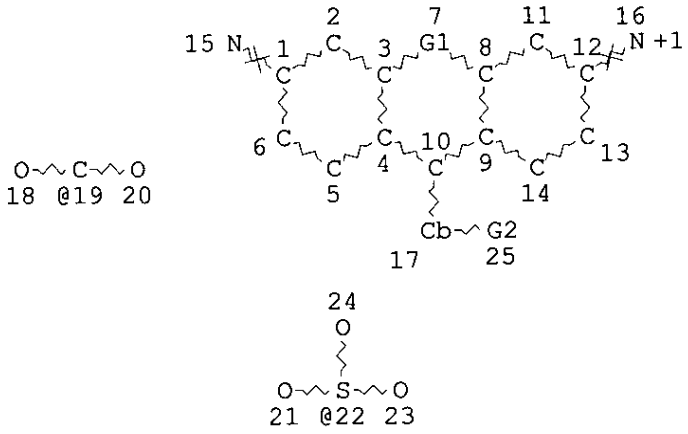


VAR G1=C/O/S/N
VAR G2=19/22
NODE ATTRIBUTES:
CHARGE IS E+1 AT 16
NSPEC IS RC AT 15
NSPEC IS RC AT 16
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY UNS AT 17
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 25

STEREO ATTRIBUTES: NONE
L5 43 SEA FILE=REGISTRY SSS FUL L3
L6 2 SEA FILE=REGISTRY ABB=ON L5 AND 1-5/M
L7 41 SEA FILE=REGISTRY ABB=ON L5 NOT L6
L9 14 SEA FILE=HCAPLUS ABB=ON L7

Remaining CA references from the 43 structures

=> D L9 1-14 ALL HITSTR

L9 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:20952 HCAPLUS
DN 140:90334
ED Entered STN: 11 Jan 2004
TI Fluorescent dyes, energy transfer couples and methods
IN O'Neill, Roger; Fisher, Peter V.

PA Guava Technologies, Inc., USA
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM G01N
CC 9-16 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004003510	A2	20040108	WO 2003-US20765	20030701
	WO 2004003510	A3	20040226		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2004073014	A1	20040415	US 2003-612297	20030701
PRAI	US 2002-393338P	P	20020701		
	US 2002-422621P	P	20021030		

AB Fluorescent dyes, fluorescence energy transfer dye couples, multi-color dye sets, can be employed in art-recognized assays and certain novel methods, such as in proximity assays.

ST fluorescence dye energy transfer couple

IT Alkyl groups
(Lower; fluorescent dyes, energy transfer couples and biol. applications)

IT Dyes
(Multi-color; fluorescent dyes, energy transfer couples and biol. applications)

IT Analysis
(Proximity; fluorescent dyes, energy transfer couples and biol. applications)

IT Energy transfer
(couples; fluorescent dyes, energy transfer couples and biol. applications)

IT Atoms
Chemical formula
Fluorescent dyes
Linking agents
Purification
Solids
Wavelength
(fluorescent dyes, energy transfer couples and biol. applications)

IT 60-32-2, 6-Aminohexanoic acid 64-19-7, Acetic acid, reactions 81-84-5, 1H,3H-Naphtho[1,8-cd]pyran-1,3-dione 102-52-3, Tetramethoxypropane 108-24-7, Acetic anhydride 117-08-8, Tetrachlorophthalic anhydride 120-37-6, 3-Ethylamino-4-methylphenol 132-86-5, 1,3-Dihydroxynaphthalene 538-75-0, Dicyclohexylcarbodiimide 594-19-4, tert-Butyllithium 872-50-4, N-Methylpyrrolidone, reactions 1336-21-6, Ammonium hydroxide 2592-95-2, 1-Hydroxybenzotriazole 7087-68-5, Diisopropylethylamine 7601-90-3, Perchloric acid, reactions 10294-34-5, Boron trichloride 32664-14-5 35843-88-0 50667-69-1, N-(Hydroxymethyl)trifluoroacetamide

65201-77-6, Tetrabutylammonium (meta)periodate 118380-06-6 167627-29-4
642079-07-0 642079-08-1 642079-09-2 642079-12-7 642079-17-2
642079-22-9 642079-27-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(fluorescent dyes, energy transfer couples and biol. applications)

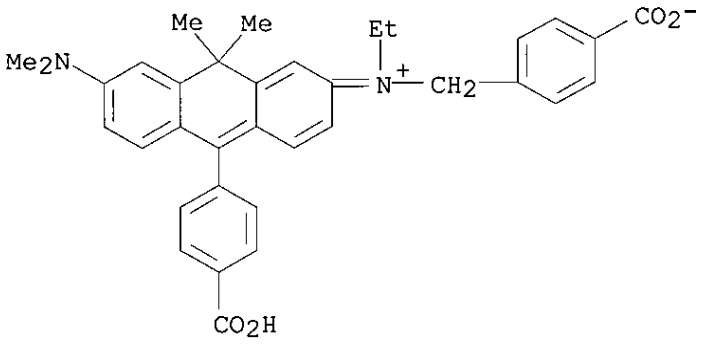
IT 642079-13-8P 642079-18-3P 642079-25-2P 642079-29-6P 643017-77-0P, Guava I
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(fluorescent dyes, energy transfer couples and biol. applications)

IT 642079-10-5P 642079-11-6P 642079-14-9P 642079-15-0P 642079-16-1P
642079-20-7P **642079-31-0P** 642079-34-3P 643017-78-1P
643017-79-2P, Guava III 643017-80-5P, Guava IV 643017-81-6P, Guava VII
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorescent dyes, energy transfer couples and biol. applications)

IT **642079-31-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorescent dyes, energy transfer couples and biol. applications)

RN 642079-31-0 HCAPLUS

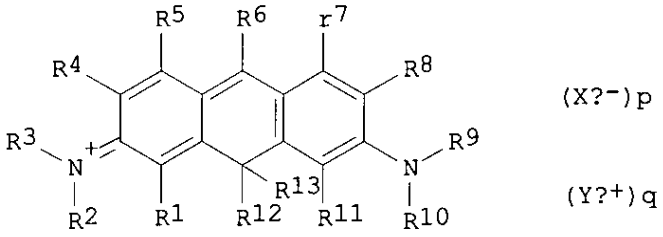
CN Benzenemethanaminium, 4-carboxy-N-[10-(4-carboxyphenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-ethyl-, inner salt (9CI) (CA INDEX NAME)



L9 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:58374 HCAPLUS
DN 138:129079
ED Entered STN: 24 Jan 2003
TI Fast-writable and precision-writable high-capacity optical storage media
IN Lehmann, Urs; Aeschlimann, Peter; Sutter, Peter; Schmidhalter, Beat; Budry, Jean-Luc; Spahni, Heinz
PA Ciba Specialty Chemicals Holding Inc., Switz.
SO PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DT Patent
LA English
IC G11B007-24; C07C251-20; C07D231-38; C09B011-02; C09D011-18; C09B011-18; C09B011-28
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003007296	A1	20030123	WO 2002-EP7434	20020704

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
EP 1412942 A1 20040428 EP 2002-764629 20020704
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
PRAI CH 2001-1297 A 20010713
CH 2001-1516 A 20010817
WO 2002-EP7434 W 20020704
OS MARPAT 138:129079
GI



I

AB The invention relates to an optical recording medium, comprising a substrate and a recording layer, wherein the recording layer comprises a compound of I (R1-13 = H, C1-24 alkyl, C2-24 alkenyl, alkynyl, C3-24 cycloalkyl, alkenyl, C7-24 aralkyl, aryl, C4-12 heteroaryl, etc.; Xm- = inorg., organic, organometallic anion; Yn+ = proton or a metal, ammonium or phosphonium cation; m, n = 1-5; p, q = 0.2-6). Generally the optical recording medium according to the invention addnl. comprises a reflecting layer. The recording media according to the invention exhibit high sensitivity and good playback characteristics, especially at high recording and playback speeds. The light stability is also excellent.

ST optical recording storage media fast writable precision high capacity
IT Optical recording materials
(fast-writable and precision-writable high-capacity optical storage media)
IT 103-69-5, N-Ethylaniline 110-91-8, Morpholine, reactions 459-57-4, 4-Fluorobenzaldehyde 17717-41-8 32364-65-1 35843-88-0, 3-Isopropenyl-N,N-dimethylaniline 68448-44-2 199605-85-1 489437-93-6 **489437-94-7 489437-95-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(fast-writable and precision-writable high-capacity optical storage media)
IT 1204-86-0P 489437-96-9P 489437-97-0P 489437-98-1P 489437-99-2P 489438-01-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(fast-writable and precision-writable high-capacity optical storage media)

IT 489461-37-2P 489461-38-3P 489461-39-4P 489461-40-7P 489461-41-8P
489461-42-9P 489461-43-0P 489461-44-1P 489461-45-2P 489461-46-3P
489461-47-4P 489461-49-6P 489473-93-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fast-writable and precision-writable high-capacity optical storage media)

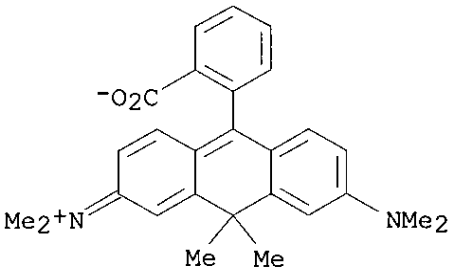
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

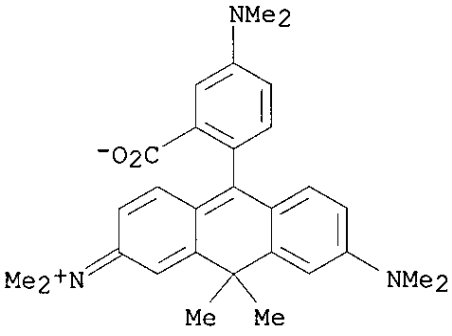
(1) Anon; PATENT ABSTRACTS OF JAPAN 1998, V1998(01)
(2) Canon; EP 0295145 A 1988
(3) Drexhage; DE 19919119 A 2000 HCAPLUS
(4) Drexhage, K; US 3781711 A 1973 HCAPLUS
(5) Hitachi; JP 09226250 A 1997 HCAPLUS
(6) Inoue, A; US 5301145 A 1994
(7) Wolleb, H; US 5851621 A 1998

IT **489437-94-7 489437-95-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(fast-writable and precision-writable high-capacity optical storage media)

RN 489437-94-7 HCAPLUS
CN Methanaminium, N-[10-(2-carboxyphenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl-, inner salt (9CI) (CA INDEX NAME)



RN 489437-95-8 HCAPLUS
CN Methanaminium, N-[10-[2-carboxy-4-(dimethylamino)phenyl]-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl-, inner salt (9CI) (CA INDEX NAME)



L9 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:686894 HCAPLUS
DN 136:20954
ED Entered STN: 20 Sep 2001
TI New fluorescent markers for the red region
AU Arden-Jacob, J.; Frantzeskos, J.; Kemnitzer, N. U.; Zilles, A.; Drexhage, K. H.
CS Department of Chemistry, University of Siegen, Siegen, 57068, Germany
SO Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy (2001), 57A(11), 2271-2283
CODEN: SAMCAS; ISSN: 1386-1425
PB Elsevier Science B.V.
DT Journal
LA English
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27, 73
AB Two new classes of fluorescent dyes have been developed as labels for the red region of the spectrum: amide-bridged benzopyrylium dyes and carbopyronine dyes. The fluorescence quantum yield ranges from 20 to 90%, the decay time from 1 to 4 ns. The pH- and solvent-dependence of absorption and fluorescence are described in detail. Covalent attachment is possible via activated carboxyl groups.
ST fluorescent marker red dye prepn benzopyrylium carbopyronine
IT Fluorescent dyes
Fluorescent indicators
(cationic; preparation of fluorescent markers for red region)
IT pH
(effect on fluorescent markers for red region)
IT Absorption spectra
Fluorescence
Fluorescence decay
(of fluorescent markers for red region)
IT Solvent effect
Solvent polarity effect
(on fluorescent markers for red region)
IT 17717-35-0 17717-41-8 32364-61-7 47484-20-8 303952-50-3
303952-53-6 303952-56-9 303952-64-9 303952-65-0 303952-67-2
303981-71-7 303981-73-9 303981-74-0 303981-76-2 303981-77-3
303981-79-5 303981-86-4 303981-87-5 303981-88-6 303981-89-7
303981-93-3 378786-73-3 378786-74-4 378786-80-2 378786-81-3
378786-82-4 378786-83-5 378786-84-6 378786-85-7 **378786-86-8**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(dye; fluorescent markers for red region)
IT 378786-76-6P 378786-79-9P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; preparation of fluorescent markers for red region)
IT 35843-88-0 209336-50-5 303982-18-5 378786-77-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; preparation of fluorescent markers for red region)
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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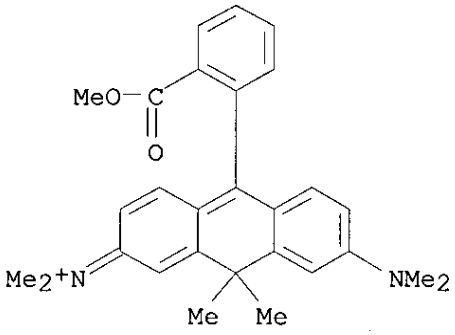
IT **378786-86-8**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(dye; fluorescent markers for red region)

RN 378786-86-8 HCAPLUS

CN Methanaminium, N-[7-(dimethylamino)-10-[2-(methoxycarbonyl)phenyl]-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl- (9CI) (CA INDEX NAME)



L9 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:277954 HCAPLUS
DN 134:291084
ED Entered STN: 19 Apr 2001
TI UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing
IN Lee, Linda G.
PA PE Corporation, USA
SO U.S., 28 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C12Q001-68
ICS C12P019-34; C07H019-00; C07H021-00
NCL 435006000
CC 3-1 (Biochemical Genetics)
Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6218124	B1	20010417	US 1999-385230	19990827
PRAI	US 1999-385230		19990827		

AB A method for detecting oligonucleotides is provided and comprises forming a series of different sized oligonucleotides labeled with an energy transfer dye, separating the series of labeled oligonucleotides based on size, and detecting the separated labeled oligonucleotide by exposing the oligonucleotides to light having a wavelength between about 250 and 450 nm, and measuring light emitted by the energy transfer dye at a wavelength greater than about 500 nm. Novel energy transfer dyes which can be used with shorter wavelength light sources are provided. These dyes include a donor dye component with an absorption maxima at a wavelength between about 250 to 450 nm and an acceptor dye component which is capable of absorbing energy emitted from the donor dye. One of the energy transfer dyes has a donor dye which is a member of a class of dyes having a coumarin or pyrene ring structure and an acceptor dye which is capable of absorbing energy emitted from the donor dye, wherein the donor dye has an absorption maxima between about 250 and 450 nm and the acceptor dye has an emission maxima at a wavelength greater than about 500 nm. The synthesis of several dyes containing coumarin and fluorescein groups was outlined.

ST fluorescent energy transfer dye nucleic acid; nucleic acid sequencing dye prodn; coumarin fluorescein dye prodn nucleic acid

IT Cyanine dyes
DNA sequence analysis
Fluorescent dyes
(UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT Oligodeoxyribonucleotides
RL: ANT (Analyte); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 3114-70-3, 1,4-Cyclohexanediamine 96686-59-8 138039-58-4, Cascade Blue acetyl azide 198546-49-5 329188-84-3 **329188-85-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye starting material; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 329188-82-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 329188-79-6P 329188-80-9P 329188-81-0P **329188-83-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 329188-78-5
RL: TEM (Technical or engineered material use); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 91-64-5DP, Coumarin, compds. 92-83-1DP, Xanthene, compds. 129-00-0DP, Pyrene, compds., preparation 574-93-6DP, Phthalocyanine, compds. 2321-07-5DP, Fluorescein, compds. 13558-31-1DP, compds. 76723-61-0DP, Benzoxanthene, compds. 78675-98-6DP, Squaraine, compds.
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dyes; UV-excitable fluorescent energy transfer dyes for nucleic acid

sequencing)
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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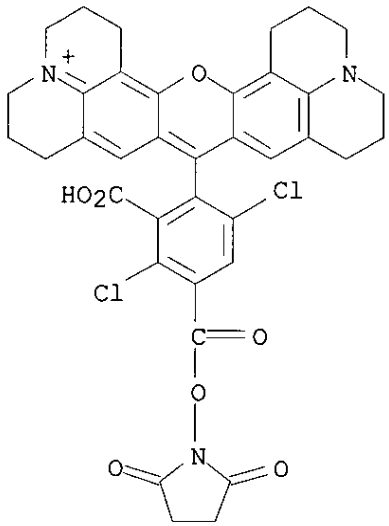
IT **329188-85-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye starting material; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)
RN 329188-85-4 HCAPLUS
CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2-carboxy-3,6-dichloro-4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]-2,3,6,7,12,13,16,17-octahydro- (9CI) (CA INDEX NAME)

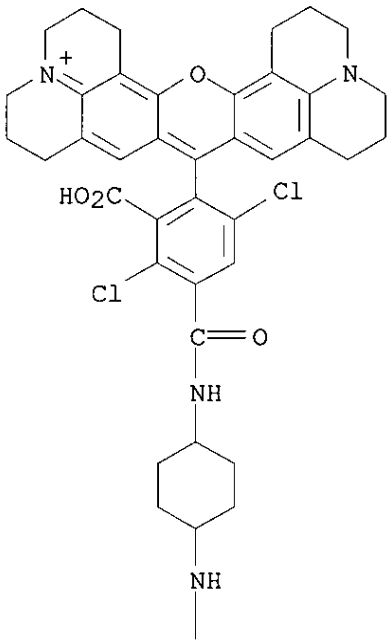


IT **329188-83-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

RN 329188-83-2 HCAPLUS

CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2-carboxy-3,6-dichloro-4-[[[4-[[[(3,6,8-trisulfo-1-pyrenyl)oxy]acetyl]amino]cyclohexyl]amino]carbonyl]phenyl]-2,3,6,7,12,13,16,17-octahydro-, inner salt, ion(2-) (9CI) (CA INDEX NAME)

PAGE 1-A



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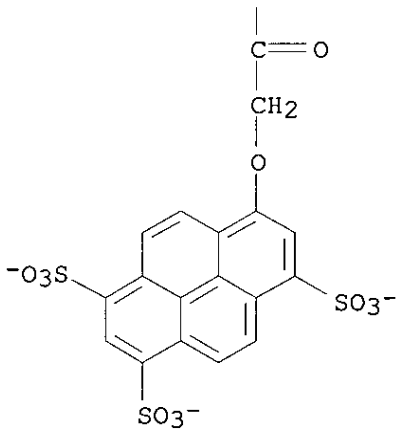


L9 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:168185 HCAPLUS
DN 134:224015
ED Entered STN: 09 Mar 2001
TI UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing
IN Lee, Linda G.
PA PE Corporation, USA
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2

DT Patent
LA English
IC ICM C12Q001-68
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001016369	A2	20010308	WO 2000-US21519	20000804
	WO 2001016369	A3	20011004		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6358684	B1	20020319	US 1999-385352	19990827
	EP 1212457	A2	20020612	EP 2000-950997	20000804
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003508065	T2	20030304	JP 2001-520914	20000804
	US 2001049109	A1	20011206	US 2001-902562	20010710
	US 2002058272	A1	20020516	US 2001-902561	20010710
	US 2003165961	A1	20030904	US 2003-359826	20030207
	US 2004076971	A1	20040422	US 2003-359931	20030207
PRAI	US 1999-385352	A1	19990827		
	WO 2000-US21519	W	20000804		
	US 2001-902561	B1	20010710		
	US 2001-902562	B1	20010710		

AB Novel energy transfer dyes which can be used with shorter wavelength light sources are provided. These dyes include a donor dye component with an absorption maxima at a wavelength between about 250 to 450 nm and an acceptor dye component which is capable of absorbing energy emitted from the donor dye. One of the energy transfer dyes has a donor dye which is a member of a class of dyes having a coumarin or pyrene ring structure and an acceptor dye which is capable of absorbing energy emitted from the donor dye, wherein the donor dye has an absorption maxima between about 250 and 450 nm and the acceptor dye has an emission maxima at a wavelength greater than about 500 nm. The synthesis of several dyes containing coumarin and fluorescein groups was outlined.

ST fluorescent energy transfer dye nucleic acid; nucleic acid sequencing dye prodn; coumarin fluorescein dye prodn nucleic acid

IT DNA sequence analysis
Fluorescent dyes
(UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 3114-70-3, 1,4-Cyclohexanediamine 96686-59-8 138039-58-4, Cascade Blue acetyl azide 198546-49-5 329188-84-3 **329188-85-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye starting material; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 329188-82-1P
RL: IMF (Industrial manufacture); PREP (Preparation)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

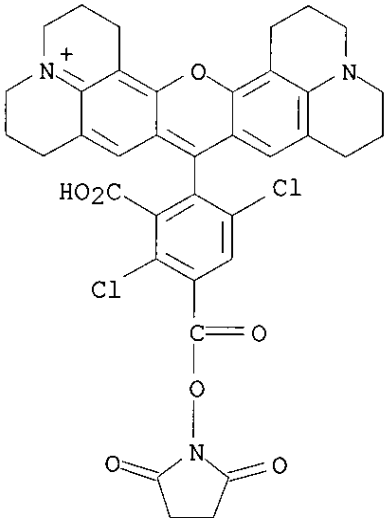
IT 329188-79-6P 329188-80-9P 329188-81-0P **329188-83-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT 329188-78-5
RL: TEM (Technical or engineered material use); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

IT **329188-85-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(dye starting material; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

RN 329188-85-4 HCAPLUS

CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2-carboxy-3,6-dichloro-4-[[(2,5-dioxo-1-pyrrolidinyl)oxy]carbonyl]phenyl]-2,3,6,7,12,13,16,17-octahydro- (9CI) (CA INDEX NAME)

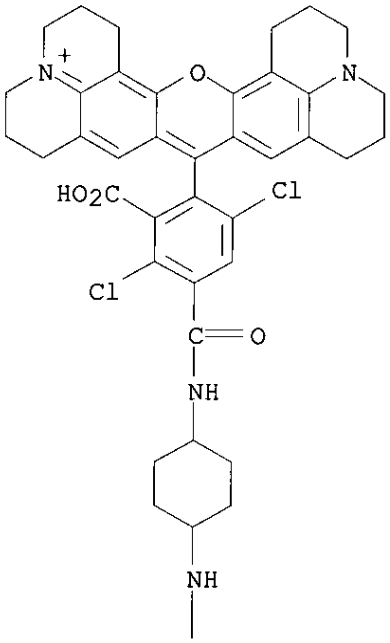


IT **329188-83-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye; UV-excitable fluorescent energy transfer dyes for nucleic acid sequencing)

RN 329188-83-2 HCAPLUS

CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-18-ium, 9-[2-carboxy-3,6-dichloro-4-[[[4-[[[(3,6,8-trisulfo-1-pyrenyl)oxy]acetyl]amino]cyclohexyl]amino]carbonyl]phenyl]-2,3,6,7,12,13,16,17-octahydro-, inner salt, ion(2-) (9CI) (CA INDEX NAME)

PAGE 1-A



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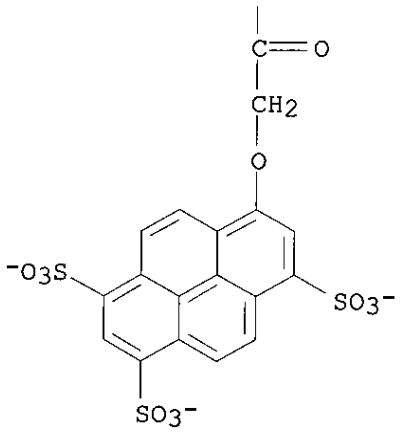

L9 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:138886 HCAPLUS
DN 135:26387
ED Entered STN: 26 Feb 2001
TI Fluorescent dyes as efficient photosensitizers for near-infrared Nd3+ emission
AU Klink, Stephen I.; Alink, Patrick Oude; Grave, Lennart; Peters, Frank G. A.; Hofstraat, Johannes W.; Geurts, Frank; van Veggel, Frank C. J. M.
CS Laboratory of Supramolecular Chemistry and Technology and MESA+ Research

Institute, University of Twente, Enschede, 7500 AE, Neth.
SO Journal of the Chemical Society, Perkin Transactions 2 (2001), (3), 363-372
CODEN: JCSPGI; ISSN: 1472-779X
PB Royal Society of Chemistry
DT Journal
LA English
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
AB A series of six dye-functionalized Nd3+ complexes have been synthesized and their photophys. properties have been studied and evaluated. The incorporated dyes dansyl, coumarin, lissamine, and Texas Red possess broad and intense absorption bands in the visible spectral region and therefore are ideally suitable as photosensitizers for near-IR Nd3+ luminescence, despite their very low intrinsic intersystem crossing quantum yields. The Nd3+ complexes display sensitized near-IR luminescence upon excitation of the dyes. The enhancement of the intersystem crossing quantum yield of the dyes by the complexed Nd3+ ions plays a crucial role in the sensitization process.
ST fluorescent dye photosensitizer near IR luminescence neodymium ion; sensitization mechanism near IR luminescence neodymium dye complex
IT Heavy atom effect
Intersystem crossing
Molecular dynamics
Photoinduced energy transfer
Singlet state excitation
(mechanism of sensitization of near-IR luminescence in dye-functionalized Nd3+ complexes)
IT Fluorescent dyes
(near-IR luminescence of Nd3+ sensitized by fluorescent dye photosensitizers)
IT IR luminescence
(near-IR; sensitized near-IR luminescence of dye-functionalized Nd3+ complexes)
IT 342647-11-4P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(reference compound; synthesis and photophysics of dye-functionalized Nd3+ complexes)
IT 271250-02-3P 343255-67-4P 343255-68-5P 343255-69-6P 343255-70-9P 343255-71-0P
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(sensitized near-IR luminescence of dye-functionalized Nd3+ complexes)
IT 342647-03-4P **342647-04-5P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and photophysics of dye-functionalized Nd3+ complexes)
IT 10045-95-1, Neodymium trinitrate 243129-88-6 243129-89-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of dye-functionalized Nd3+ complexes)
IT 342646-99-5P 342647-00-1P 342647-01-2P 342647-02-3P 342647-05-6P 342647-06-7P 342647-07-8P 342647-08-9P 342647-09-0P
342647-10-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of dye-functionalized Nd3+ complexes)
RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

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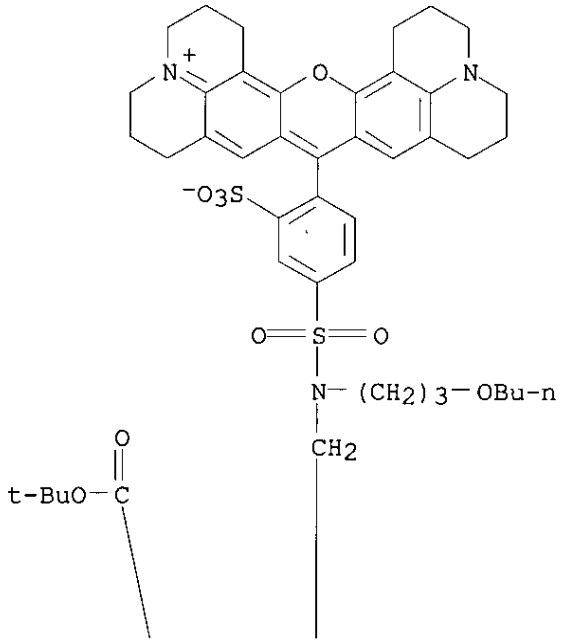
(41) Werts, M; Chem Phys Lett 1997, V276, P196 HCAPLUS
(42) Werts, M; J Chem Soc Perkin Trans 2 2000, P433 HCAPLUS
(43) Zhang, Q; Appl Phys Lett 1998, V72, P407 HCAPLUS
(44) Zhang, Q; Appl Phys Lett 1999, V74, P3577 HCAPLUS

IT **342647-04-5P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and photophysics of dye-functionalized Nd3+ complexes)

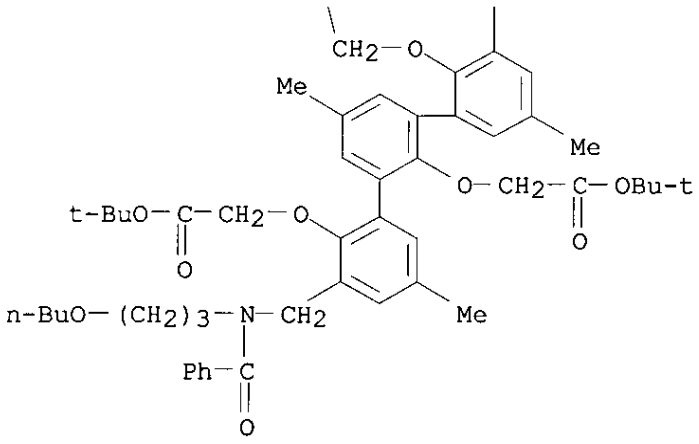
RN 342647-04-5 HCAPLUS

CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-4-ium, 9-[4-[[[[3''-[[benzoyl(3-butoxypropyl)amino]methyl]-2,2',2''-tris[2-(1,1-dimethylethoxy)-2-oxoethoxy]-5,5',5''-trimethyl[1,1':3',1''-terphenyl]-3-yl]methyl](3-butoxypropyl)amino]sulfonyl]-2-sulfophenyl]-2,3,6,7,12,13,16,17-octahydro-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



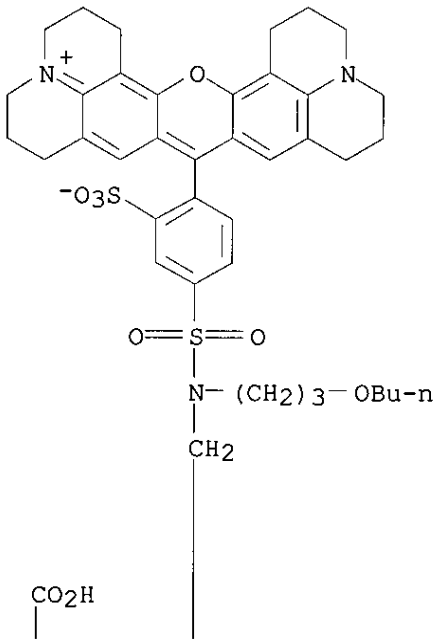
PAGE 2-A



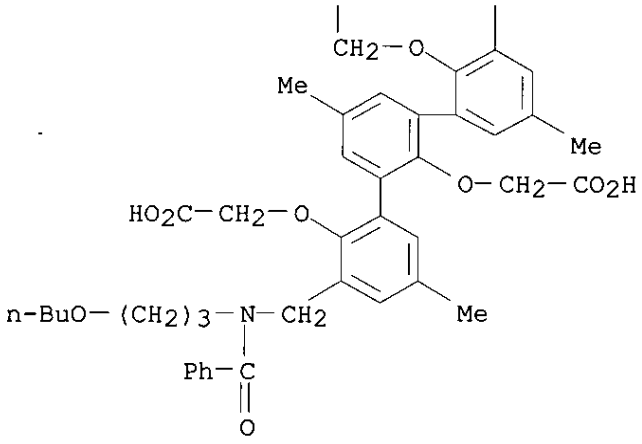
IT **342647-10-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of dye-functionalized Nd3+ complexes)
RN 342647-10-3 HCAPLUS
CN 1H,5H,11H,15H-Xantheno[2,3,4-ij:5,6,7-i'j']diquinolizin-4-ium, 9-[4-[[[[3''-[[benzoyl(3-butoxypropyl)amino]methyl]-2,2',2''-tris(carboxymethoxy)-5,5',5''-trimethyl[1,1':3',1''-terphenyl]-3-yl]methyl](3-butoxypropyl)amino]sulfonyl]-2-sulfophenyl]-

2,3,6,7,12,13,16,17-octahydro-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

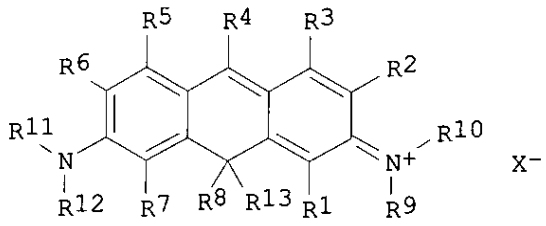


L9 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:772710 HCAPLUS
DN 133:336553
ED Entered STN: 03 Nov 2000
TI Carbopyronine fluorescent dyes, their production and their use as markers for biological compounds

IN Drexhage, Karl-Heinz; Arden-Jacob, Jutta; Frantzeskos, Jorg; Zilles, Alexander
PA Germany
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C09B011-00
ICS G01N033-533; G01N033-58; C07H021-00; C09B011-02; C09B011-04; C09B011-28; C12Q001-68
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 9
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000064986	A1	20001102	WO 2000-EP3568	20000419
	W: AU, CA, CN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19919119	A1	20001102	DE 1999-19919119	19990427
	EP 1173519	A1	20020123	EP 2000-922654	20000419
	EP 1173519	B1	20030820		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002543233	T2	20021217	JP 2000-614327	20000419
PRAI	DE 1999-19919119	A	19990427		
	WO 2000-EP3568	W	20000419		

OS CASREACT 133:336553; MARPAT 133:336553
GI



I

AB The invention relates to carbopyronine fluorescent dyes (I; R1, R2, R3, R4, R5, R6, R7 = H, halogen, hydroxy, amino, sulfo, carboxy, aldehyde, C≤20-organic group, or adjacent substituents may combine to form annelated rings; R8, R13 = C≤20-organic group, or together may form a ring system; R9, R10, R11, R12 = H, C≤20-organic group, or adjacent substituents may form ring systems; X- = anion) which are prepared for use as biol. markers. I are site-specific and readily applied to immunochem. and nucleic acid hybridization processes.
ST carbopyronine fluorescent dye biol marker prodn
IT Nucleic acids
RL: ANT (Analyte); ANST (Analytical study)
(analogs; carbopyronine fluorescent dye markers for)
IT Nucleic acid hybridization
(carbopyronine fluorescent dye markers for)

IT Haptens
Nucleic acids
Nucleosides, analysis
Nucleotides, analysis
Peptides, analysis
Proteins, general, analysis
RL: ANT (Analyte); ANST (Analytical study)
(carbopyronine fluorescent dye markers for)

IT Ion exchangers
(carriers; carbopyronine fluorescent dye markers for biol. compds.)

IT Polyphosphoric acids
RL: CAT (Catalyst use); USES (Uses)
(catalysts; production of carbopyronine fluorescent dye markers for biol. compds.)

IT Immunoassay
(fluorescence; carbopyronine fluorescent dye markers for)

IT Glass, uses
RL: NUU (Other use, unclassified); USES (Uses)
(porous, carriers; carbopyronine fluorescent dye markers for biol. compds.)

IT Fluorescent dyes
(production of carbopyronine fluorescent dye markers for biol. compds.)

IT 9004-34-6, Cellulose, uses 9004-54-0, Dextran, uses
RL: NUU (Other use, unclassified); USES (Uses)
(carrier; carbopyronine fluorescent dye markers for biol. compds.)

IT 9004-34-6D, Cellulose, derivs., uses
RL: NUU (Other use, unclassified); USES (Uses)
(carriers; carbopyronine fluorescent dye markers for biol. compds.)

IT 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses
10294-34-5, Boron trichloride
RL: CAT (Catalyst use); USES (Uses)
(catalyst; production of carbopyronine fluorescent dye markers for biol. compds.)

IT **303952-91-2P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(cysteine conjugate; carbopyronine fluorescent dye markers for biol. compds.)

IT 303952-92-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(dUTP conjugate; carbopyronine fluorescent dye markers for biol. compds.)

IT 303952-37-6P 303952-63-8P 303952-68-3P **303952-69-4P**
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)

IT 17717-51-0P 303952-36-5P 303952-39-8P 303952-40-1P 303952-48-9P
303952-49-0P 303952-59-2P 303952-67-2P **303952-70-7P**
303952-73-0P 303952-74-1P 303952-79-6P
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)

IT **303952-80-9**
RL: BSU (Biological study, unclassified); RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)

IT 17717-35-0 17717-41-8 32364-61-7 303952-35-4 303952-38-7
303952-41-2 303952-42-3 303952-43-4 303952-44-5 303952-45-6
303952-46-7 303952-47-8 303952-50-3 303952-51-4 303952-52-5
303952-53-6 303952-54-7 303952-55-8 303952-56-9 303952-57-0
303952-58-1 303952-60-5 303952-61-6 303952-62-7 303952-64-9
303952-65-0 303952-66-1 **303952-71-8 303952-72-9**
303952-75-2 303952-76-3 303952-77-4
303952-78-5
RL: BSU (Biological study, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)

IT 303952-88-7P **303952-89-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate for conjugate formation; carbopyronine fluorescent dye markers for biol. compds.)

IT 303952-84-3P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; production of carbopyronine fluorescent dye markers for biol. compds.)

IT 65201-77-6, Tetrabutylammonium periodate
RL: NUU (Other use, unclassified); USES (Uses)
(oxidizing agent; production of carbopyronine fluorescent dye markers for biol. compds.)

IT 67-66-3, uses 75-09-2, Methylene chloride, uses 107-06-2, 1,2-Dichloroethane, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; production of carbopyronine fluorescent dye markers for biol. compds.)

IT 52-90-4, L-Cysteine, reactions 108-31-6, Maleic anhydride, reactions 6066-82-6 90015-82-0 185523-10-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material for conjugate formation; carbopyronine fluorescent dye markers for biol. compds.)

IT 74-83-9, Methyl bromide, reactions 108-86-1, reactions 1703-46-4, 4-(Hydroxymethyl)-N,N-dimethylaniline 16518-64-2 32664-13-4
32664-14-5 32987-62-5 35843-88-0 65232-57-7 303952-81-0
303952-82-1 303952-83-2 303952-85-4 303952-86-5 303952-87-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; production of carbopyronine fluorescent dye markers for biol. compds.)

IT 303952-94-5P
RL: IMF (Industrial manufacture); PREP (Preparation)
(steroid conjugate; carbopyronine fluorescent dye markers for biol. compds.)

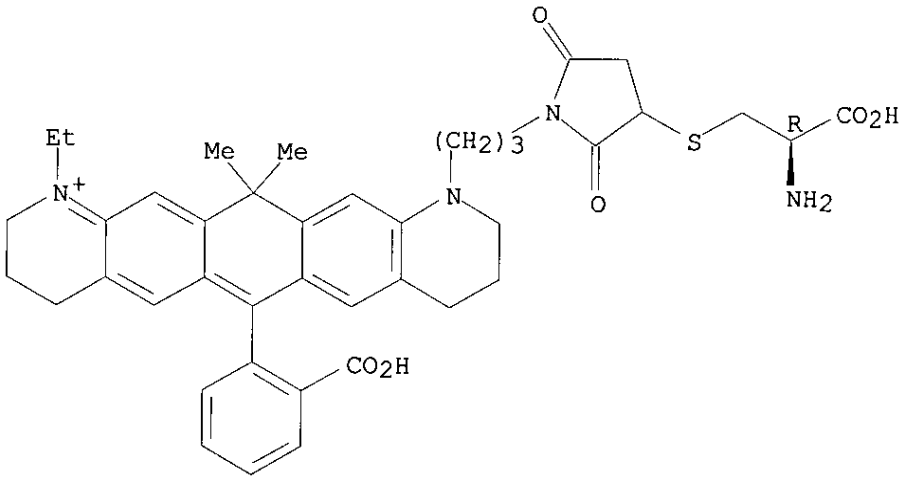
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

(1) Aaron, C; JOURNAL OF THE CHEMICAL SOCIETY, SECTION B: PHYSICAL ORGANIC CHEMISTRY 1971, 2, P319
(2) Bergot, B; US 5366860 A 1994 HCAPLUS
(3) Boehringer Mannheim Gmbh; EP 0543333 A 1993 HCAPLUS
(4) Castelino, R; JOURNAL OF THE CHEMICAL SOCIETY, SECTION B: PHYSICAL ORGANIC CHEMISTRY 1971, 7, P1468
(5) Hallas, G; JOURNAL OF THE CHEMICAL SOCIETY, SECTION B: PHYSICAL ORGANIC CHEMISTRY 1967, 1, P91 HCAPLUS

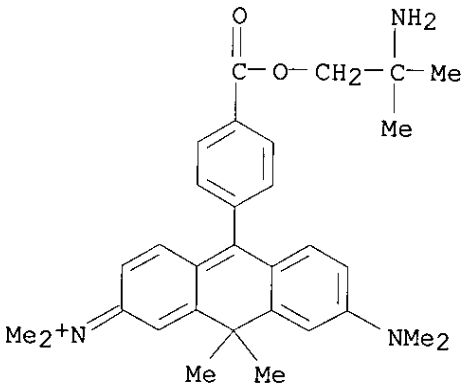
IT **303952-91-2P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(cysteine conjugate; carbopyronine fluorescent dye markers for biol.

compds.)
RN 303952-91-2 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 11-[3-[3-[[(2R)-2-amino-2-carboxyethyl]thio]-2,5-dioxo-1-pyrrolidinyl]propyl]-6-(2-carboxyphenyl)-1-ethyl-2,3,4,8,9,10,11,13-octahydro-13,13-dimethyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **303952-69-4P**
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)
RN 303952-69-4 HCAPLUS
CN Methanaminium, N-[10-[4-[(2-amino-2-methylpropoxy)carbonyl]phenyl]-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl- (9CI) (CA INDEX NAME)

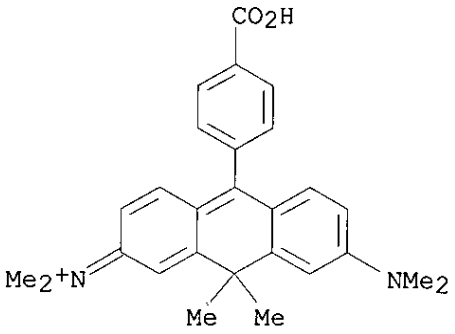


IT **303952-70-7P 303952-73-0P 303952-74-1P**
RL: BSU (Biological study, unclassified); IMF (Industrial manufacture); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(dye; carbopyronine fluorescent dye markers for biol. compds.)

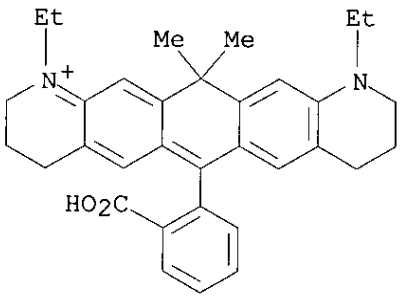
RN 303952-70-7 HCAPLUS

CN Methanaminium, N-[10-(4-carboxyphenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl- (9CI) (CA INDEX NAME)



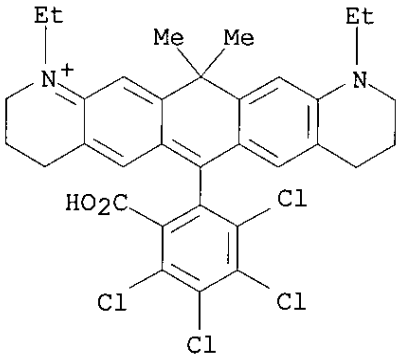
RN 303952-73-0 HCAPLUS

CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxyphenyl)-1,11-diethyl-2,3,4,8,9,10,11,13-octahydro-13,13-dimethyl- (9CI) (CA INDEX NAME)

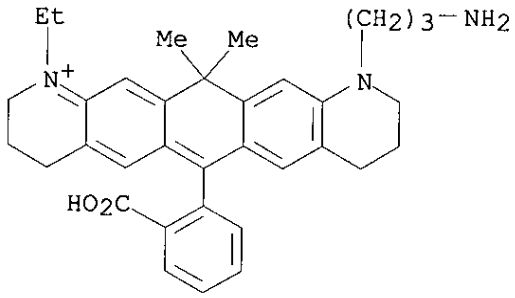


RN 303952-74-1 HCAPLUS

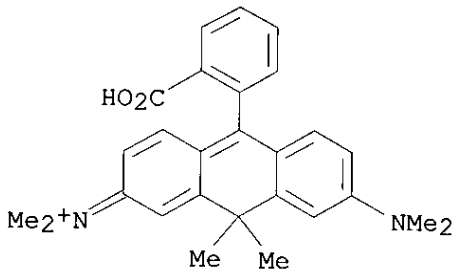
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxy-3,4,5,6-tetrachlorophenyl)-1,11-diethyl-2,3,4,8,9,10,11,13-octahydro-13,13-dimethyl- (9CI) (CA INDEX NAME)



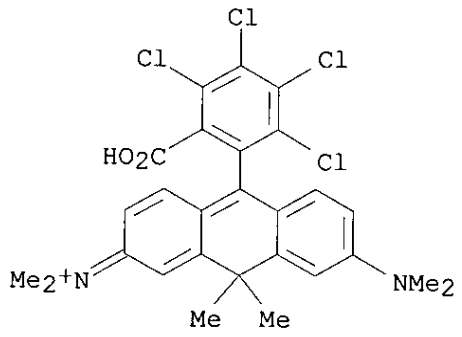
IT **303952-80-9**
RL: BSU (Biological study, unclassified); RCT (Reactant); TEM (Technical or engineered material use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)
RN 303952-80-9 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 11-(3-aminopropyl)-6-(2-carboxyphenyl)-1-ethyl-2,3,4,8,9,10,11,13-octahydro-13,13-dimethyl- (9CI) (CA INDEX NAME)



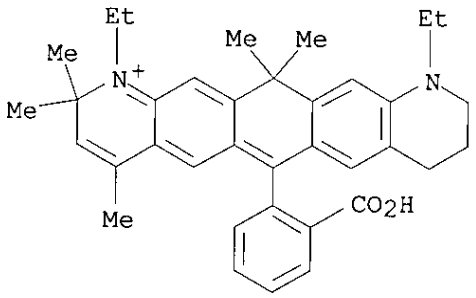
IT **303952-71-8 303952-72-9 303952-75-2**
303952-76-3 303952-77-4 303952-78-5
RL: BSU (Biological study, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(dye; carbopyronine fluorescent dye markers for biol. compds.)
RN 303952-71-8 HCAPLUS
CN Methanaminium, N-[10-(2-carboxyphenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl- (9CI) (CA INDEX NAME)



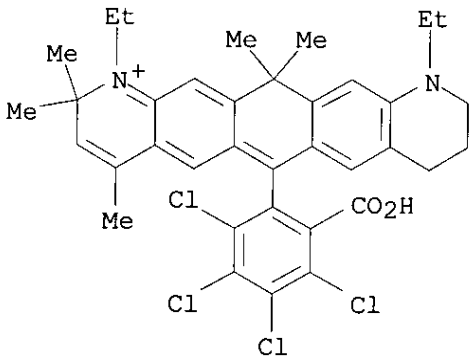
RN 303952-72-9 HCAPLUS
CN Methanaminium, N-[10-(2-carboxy-3,4,5,6-tetrachlorophenyl)-7-(dimethylamino)-9,9-dimethyl-2(9H)-anthracenylidene]-N-methyl- (9CI) (CA INDEX NAME)



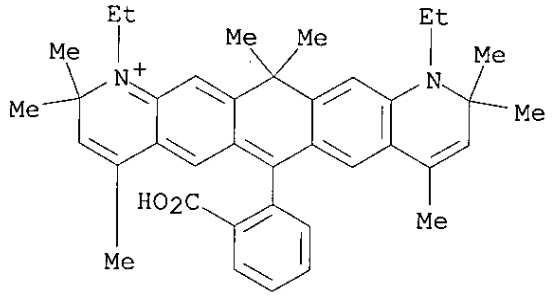
RN 303952-75-2 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxyphenyl)-1,11-diethyl-2,8,9,10,11,13-hexahydro-2,2,4,13,13-pentamethyl- (9CI) (CA INDEX NAME)



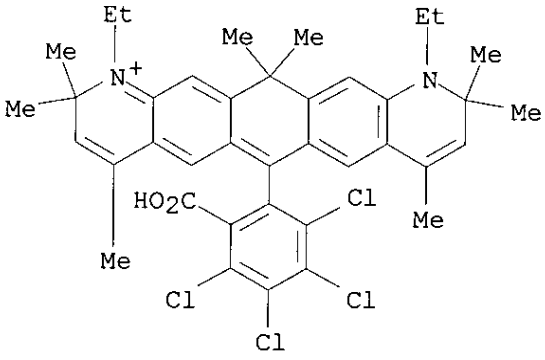
RN 303952-76-3 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxy-3,4,5,6-tetrachlorophenyl)-1,11-diethyl-2,8,9,10,11,13-hexahydro-2,2,4,13,13-pentamethyl- (9CI) (CA INDEX NAME)



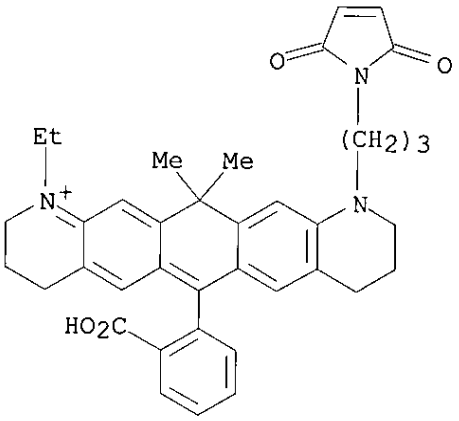
RN 303952-77-4 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxyphenyl)-1,11-diethyl-2,10,11,13-tetrahydro-2,2,4,8,10,10,13,13-octamethyl- (9CI) (CA INDEX NAME)



RN 303952-78-5 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxy-3,4,5,6-tetrachlorophenyl)-1,11-diethyl-2,10,11,13-tetrahydro-2,2,4,8,10,10,13,13-octamethyl- (9CI) (CA INDEX NAME)



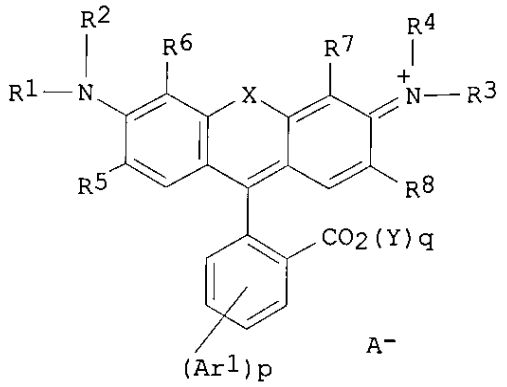
IT **303952-89-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate for conjugate formation; carbopyronine fluorescent dye markers for biol. compds.)
RN 303952-89-8 HCAPLUS
CN Benzo[1,2-g:5,4-g']diquinolinium, 6-(2-carboxyphenyl)-11-[3-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)propyl]-1-ethyl-2,3,4,8,9,10,11,13-octahydro-13,13-dimethyl- (9CI) (CA INDEX NAME)



L9 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:232644 HCAPLUS
DN 132:286127
ED Entered STN: 11 Apr 2000
TI Rhodamine derivative and color conversion film for organic electroluminescent device
IN Ikeda, Shuji; Kawamura, Hisayuki; Mizogami, Shigeaki; Hironaka, Yoshio
PA Idemitsu Kosan Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 62 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09B011-28
ICS C09K011-06; H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 41, 74
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000103975	A2	20000411	JP 1998-273972	19980928
PRAI	JP 1998-273972		19980928		

OS MARPAT 132:286127
GI



I

AB A rhodamine derivative, suited for use as a blue-red color conversion dye in a blue-emitting electroluminescent device, is represented by I [R1-8 and Y = H, alkyl,etc.; X = O and S; Ar1 = alkyl, aryl, etc.; p = 1 and 2; q = 0 and 1; A = counter ion].

ST rhodamine dye color conversion org electroluminescent device

IT Optical instruments
(color conversion film; rhodamine derivative and color conversion film for organic electroluminescent device)

IT Electroluminescent devices
Fluorescent substances
(rhodamine derivative and color conversion film for organic electroluminescent device)

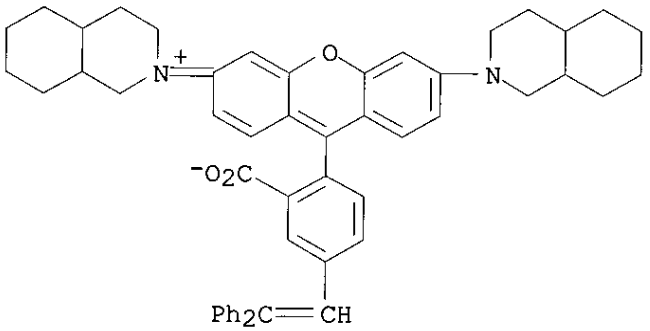
IT Dyes
(rhodamine; rhodamine derivative and color conversion film for organic electroluminescent device)

IT 64-17-5, Ethanol, reactions 86-90-8 90-11-9 91-68-9, N,N-Diethyl-3-aminophenol 100-60-7, N-Methylcyclohexylamine 100-61-8, N-Methylaniline, reactions 103-67-3, N-Methyl-N-benzylamine 106-20-7, Bis(2-ethylhexyl)amine 110-96-3, Diisobutylamine 119-61-9, Benzophenone, reactions 120-37-6 122-52-1, Triethylphosphite 128-08-5, N-Bromosuccinimide 143-66-8, Sodium tetraphenylborate 328-70-1, 3,5-Bis(trifluoromethyl)bromobenzene 401-78-5, 3-Trifluoromethylbromobenzene 573-17-1, 9-Bromophenanthrene 644-13-3, 2-Benzoylnaphthalene 942-06-3 1095-03-0, Phenylborate 2128-93-0, 4-Phenylbenzophenone 2398-37-0, 3-Bromoanisole 2852-68-8, 3,3'-Dimethylbenzophenone 3478-90-8, 4,4'-Diphenylbenzophenone 3972-65-4 5419-55-6, Triisopropyl borate 6329-61-9, Decahydroisoquinoline 7439-95-4, Magnesium, reactions 14548-46-0, 4-Benzoylpyridine 14643-62-0 15796-82-4, 4,4'-Di(tert-butyl)benzophenone 16911-33-4, 4-Diphenylaminobenzophenone 18648-66-3 19438-61-0, 4-Methylphthalic acid anhydride 22679-54-5 32319-29-2 34184-41-3 41175-50-2, 8-Hydroxyjulolidine 54263-65-9 101507-70-4 263872-67-9 263872-69-1 263873-23-0 263873-24-1 263873-25-2 263873-26-3 263873-27-4 263873-48-9 263873-49-0 263873-53-6 **263873-54-7 263873-55-8** 263873-62-7 **263873-63-8 263873-64-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(rhodamine derivative and color conversion film for organic electroluminescent device)

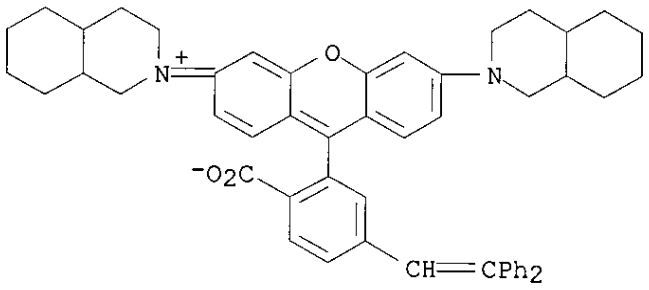
IT 21991-02-6P 23162-23-4P, 1-Naphthyl borate 33019-46-4P 38568-41-1P, Diethyl 4-bromophthalate 96259-57-3P, 1,3-Benzenedicarboxylic acid, 4-methyl-, diethyl ester 96259-71-1P 100010-21-7P 108403-83-4P 136316-72-8P 207222-89-7P 210834-40-5P 210834-42-7P 263872-68-0P 263872-70-4P 263872-71-5P 263872-72-6P 263872-73-7P 263872-74-8P 263872-75-9P 263872-76-0P 263872-77-1P 263872-78-2P 263872-79-3P 263872-80-6P 263872-81-7P 263872-82-8P 263872-83-9P 263872-84-0P 263872-85-1P 263872-86-2P 263872-87-3P 263872-88-4P 263872-89-5P 263872-90-8P 263872-91-9P 263872-92-0P 263872-93-1P 263872-94-2P 263872-95-3P 263872-96-4P 263872-97-5P 263872-98-6P 263872-99-7P 263873-00-3P 263873-01-4P 263873-02-5P 263873-03-6P 263873-04-7P 263873-05-8P 263873-06-9P 263873-07-0P 263873-08-1P 263873-09-2P 263873-10-5P 263873-11-6P 263873-12-7P 263873-13-8P 263873-14-9P 263873-15-0P 263873-16-1P 263873-17-2P 263873-18-3P 263873-19-4P 263873-20-7P 263873-21-8P 263873-22-9P 263873-28-5P 263873-29-6P 263873-30-9P 263873-31-0P 263873-32-1P 263873-33-2P 263873-34-3P 263873-35-4P 263873-37-6P 263873-39-8P 263873-41-2P 263873-42-3P 263873-43-4P 263873-45-6P 263873-47-8P **263873-50-3P** **263873-51-4P** 263873-52-5P **263873-56-9P** **263873-57-0P** 263873-58-1P **263873-59-2P** **263873-60-5P** 263873-61-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(rhodamine derivative and color conversion film for organic electroluminescent device)

IT **263873-54-7 263873-55-8 263873-63-8 263873-64-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(rhodamine derivative and color conversion film for organic electroluminescent device)

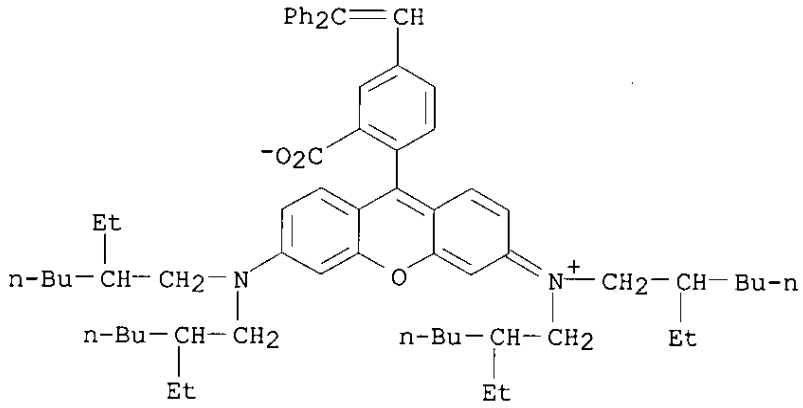
RN 263873-54-7 HCAPLUS
CN Isoquinolinium, 2-[9-[2-carboxy-4-(2,2-diphenylethenyl)phenyl]-6-(octahydro-2(1H)-isoquinolinyl)-3H-xanthen-3-ylidene]decahydro-, inner salt (9CI) (CA INDEX NAME)



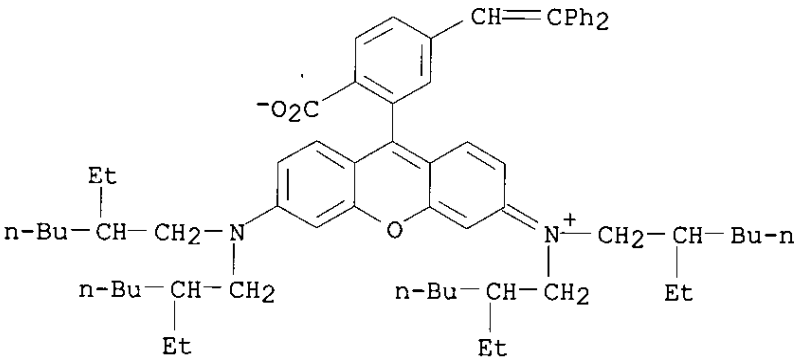
RN 263873-55-8 HCAPLUS
CN Isoquinolinium, 2-[9-[2-carboxy-5-(2,2-diphenylethenyl)phenyl]-6-(octahydro-2(1H)-isoquinolinyl)-3H-xanthen-3-ylidene]decahydro-, inner salt (9CI) (CA INDEX NAME)



RN 263873-63-8 HCAPLUS
CN 1-Hexanaminium, N-[6-[bis(2-ethylhexyl)amino]-9-[2-carboxy-4-(2,2-diphenylethenyl)phenyl]-3H-xanthen-3-ylidene]-2-ethyl-N-(2-ethylhexyl)-, inner salt (9CI) (CA INDEX NAME)



RN 263873-64-9 HCAPLUS
CN 1-Hexanaminium, N-[6-[bis(2-ethylhexyl)amino]-9-[2-carboxy-5-(2,2-diphenylethenyl)phenyl]-3H-xanthen-3-ylidene]-2-ethyl-N-(2-ethylhexyl)-, inner salt (9CI) (CA INDEX NAME)

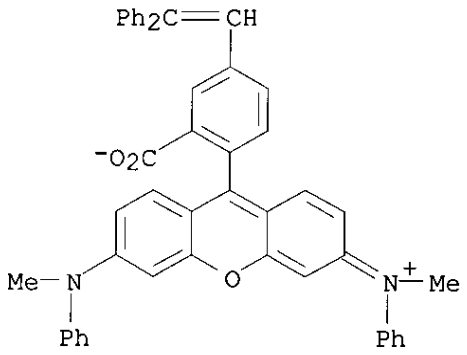


IT **263873-50-3P 263873-51-4P 263873-56-9P**
263873-57-0P 263873-59-2P 263873-60-5P
RL: SPN (Synthetic preparation); PREP (Preparation)

(rhodamine derivative and color conversion film for organic electroluminescent device)

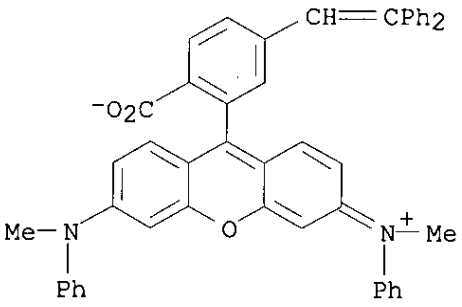
RN 263873-50-3 HCAPLUS

CN Benzenaminium, N-[9-[2-carboxy-4-(2,2-diphenylethenyl)phenyl]-6-(methylphenylamino)-3H-xanthen-3-ylidene]-N-methyl-, inner salt (9CI) (CA INDEX NAME)



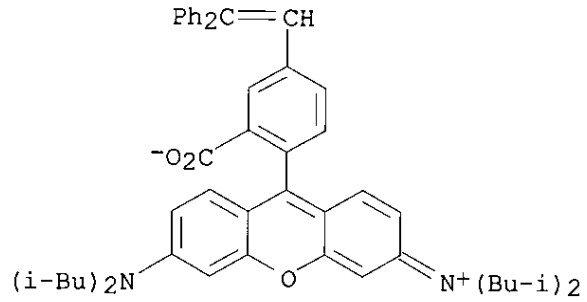
RN 263873-51-4 HCAPLUS

CN Benzenaminium, N-[9-[2-carboxy-5-(2,2-diphenylethenyl)phenyl]-6-(methylphenylamino)-3H-xanthen-3-ylidene]-N-methyl-, inner salt (9CI) (CA INDEX NAME)

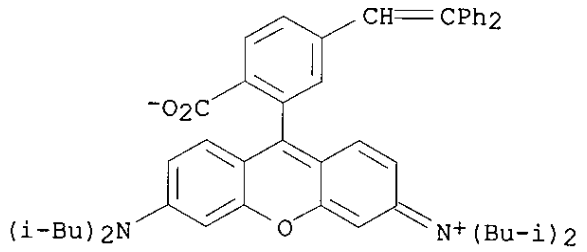


RN 263873-56-9 HCAPLUS

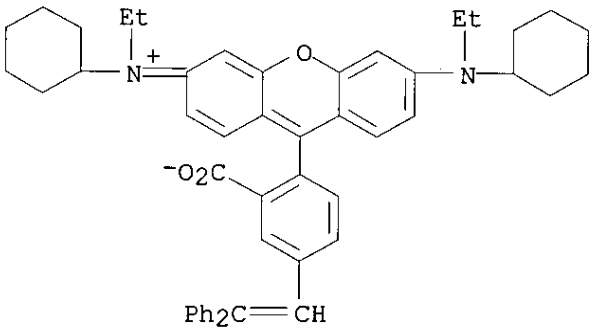
CN 1-Propanaminium, N-[6-[bis(2-methylpropyl)amino]-9-[2-carboxy-4-(2,2-diphenylethenyl)phenyl]-3H-xanthen-3-ylidene]-2-methyl-N-(2-methylpropyl)-, inner salt (9CI) (CA INDEX NAME)



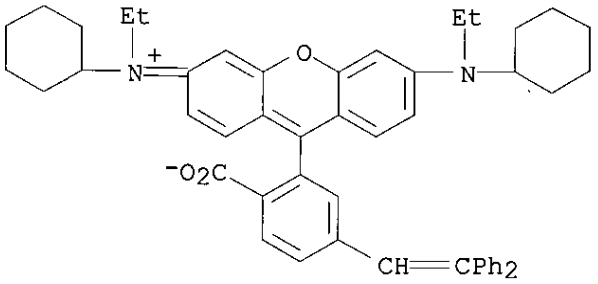
RN 263873-57-0 HCAPLUS
CN 1-Propanaminium, N-[6-[bis(2-methylpropyl)amino]-9-[2-carboxy-5-(2,2-diphenylethenyl)phenyl]-3H-xanthen-3-ylidene]-2-methyl-N-(2-methylpropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 263873-59-2 HCAPLUS
CN Cyclohexanaminium, N-[9-[2-carboxy-4-(2,2-diphenylethenyl)phenyl]-6-(cyclohexylethylamino)-3H-xanthen-3-ylidene]-N-ethyl-, inner salt (9CI) (CA INDEX NAME)



RN 263873-60-5 HCAPLUS
CN Cyclohexanaminium, N-[9-[2-carboxy-5-(2,2-diphenylethenyl)phenyl]-6-(cyclohexylethylamino)-3H-xanthen-3-ylidene]-N-ethyl-, inner salt (9CI) (CA INDEX NAME)



L9 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:180912 HCAPLUS
DN 132:238366
ED Entered STN: 21 Mar 2000
TI Preparation of oxyalkylene-substituted aminophenol intermediate for poly(oxyalkylenated) colorants
IN Harris, Philip G.; Batlaw, Rajnish
PA Milliken & Company, USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07C215-00
ICS C07C211-00
NCL 564443000
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 42
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6040482	A	20000321	US 1999-263902	19990305
WO 2000051967	A1	20000908	WO 2000-US2677	20000202
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1159254	A1	20011205	EP 2000-908446	20000202
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
PRAI US 1999-263902	A	19990305		
WO 2000-US2677	W	20000202		

OS MARPAT 132:238366
AB Title intermediate compound, which may be reacted with suitable compds. to ultimately form any number of different colorants, including xanthenes, oxazines, coumarins, and the like, is produced in a single step by reacting an oxyalkylene oxide having from 3 to 12 carbon atoms (branched or unbranched), glycidol, or a glycidyl directly with aminophenol without the use of a catalyst and at a relatively low temperature Thus, a propoxylated m-aminophenol was prepared by reaction of propylene oxide 373 with m-aminophenol 350 parts at a temperature of .apprx.150°F and a pressure

of .apprx.20-60 psi for 2 h, which was reacted with phthalic anhydride and 1-methylimidazole to give a N,N-dipropoxylated xanthene.

ST alkoxylated aminophenol intermediate prepn colorant; propoxylated aminophenol xanthene colorant prepn

IT Coloring materials
(preparation of coumarin colorants)

IT 261735-40-4P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of oxyalkylene-substituted aminophenol intermediate for poly(oxyalkylenated) colorants)

IT 261735-41-5P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of coumarin colorants)

IT 95-54-5, o-Phenylenediamine, reactions 105-56-6, Ethylcyanoacetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of coumarin colorants)

IT 75-56-9, reactions 591-27-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of oxyalkylene-substituted aminophenol intermediate for poly(oxyalkylenated) colorants)

IT 261731-33-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of oxypropylene oxazine colorants)

IT 7632-00-0, Sodium nitrite
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of oxypropylene oxazine colorants)

IT **261731-32-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of propoxylated xanthene colorants)

IT 85-44-9, 1,3-Isobenzofurandione 616-47-7, 1-Methylimidazole
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of propoxylated xanthene colorants)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

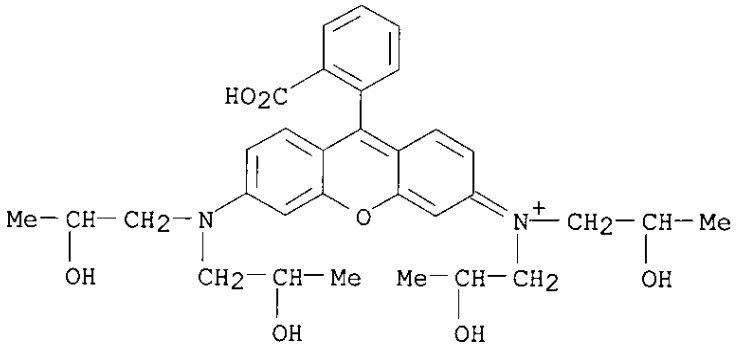
RE

(1) Anon; EP 0468821 A1 1992 HCAPLUS
(2) Barry; US 5250708 1993 HCAPLUS
(3) Zink; US 4806657 1989 HCAPLUS

IT **261731-32-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of propoxylated xanthene colorants)

RN 261731-32-2 HCAPLUS

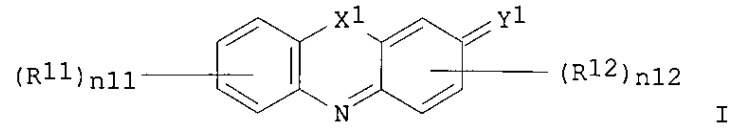
CN 1-Propanaminium, N-[6-[bis(2-hydroxypropyl)amino]-9-(2-carboxyphenyl)-3H-xanthen-3-ylidene]-2-hydroxy-N-(2-hydroxypropyl)-, chloride (9CI) (CA INDEX NAME)



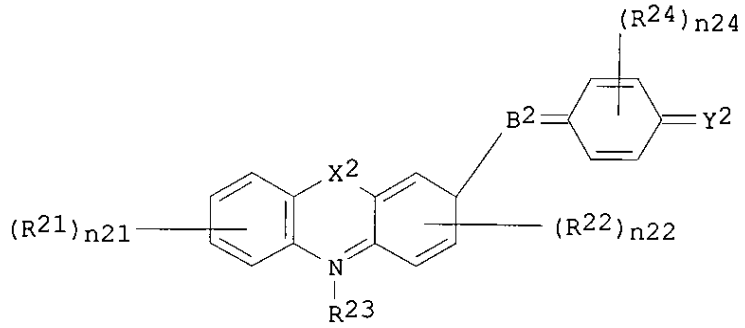
L9 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:162179 HCAPLUS
DN 130:184844
ED Entered STN: 12 Mar 1999
TI Photoelectric converters and photoelectrochemical cells
IN Tsukahara, Jiro; Watanabe, Tetsuya
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01M014-00
ICS G03G005-09; H01L031-04
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11067285	A2	19990309	JP 1997-246050	19970827
PRAI	JP 1997-246050		19970827		

OS MARPAT 130:184844
GI



I



II

AB The photoelec. converters have a photosensitive layer on a conductive support, where the photosensitive layer contains fine semiconductor particles sensitized by I (R11 and R12 = monovalent substituents; n11 = 0-4; n12 = 0-3; X1 = O, S, Se, Te, imino group, alkylene group, or alkenyl group; Y1 = O, S, Se, Te, imino group, immonium group, or methylene group; R11 may form rings when n11 is ≥2, R12 may form rings when n12 is ≥2, and R12 and Y1 may form rings) or II (R21, R22, and R24 = monovalent substituents; n21 and n24 = 0-4; n22 = 0-3; R23 = H, alkyl group, aryl group, or heterocyclic group; X2 = O, S, Se, Te, imino group, alkylene group, or alkenyl group; Y2 = O, S, Se, Te, imino group, immonium group, or methylene group; B2 = N or methyne group; R21 may form rings when n21 is ≥2; R22 may form rings when n22 is ≥2; and R24 may form rings when when n24 is ≥2; and ≥2 of R22, B2, R24, and/or Y2 may form rings together). Photoelectrochem. cells contain the above converter, a charge moving layer, and a counter electrode.

ST photoelectrochem cell acridane deriv photo sensitizer; acridane deriv photo sensitizer semiconductor electrode

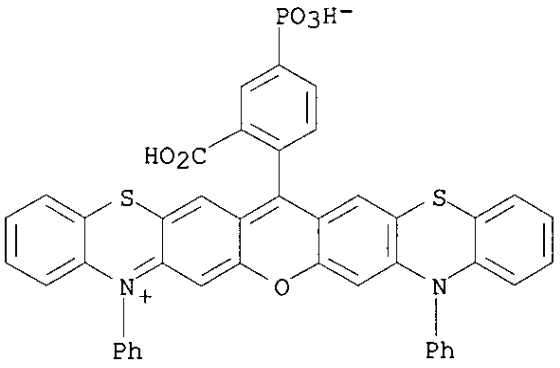
IT Photoelectrochemical cells
(electrodes containing acridane derivative sensitized titania particles on conductive substrates for photoelectrochem. cells)

IT 61-73-4 635-78-9 13463-67-7, Titania, uses 220498-84-0 220498-85-1 220498-86-2 **220498-87-3**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrodes containing acridane derivative sensitized titania particles on conductive substrates for photoelectrochem. cells)

IT **220498-87-3**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electrodes containing acridane derivative sensitized titania particles on conductive substrates for photoelectrochem. cells)

RN 220498-87-3 HCAPLUS

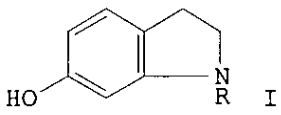
CN 5H-Pyrano[2,3-b:6,5-b']diphenothiazinium, 16-(2-carboxy-4-phosphonophenyl)-5,9-diphenyl-, inner salt (9CI) (CA INDEX NAME)



L9 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1994:56690 HCAPLUS
DN 120:56690
ED Entered STN: 05 Feb 1994
TI Preparation of 6-hydroxyindolines for use in preparation of novel laser dyes
IN Field, George F.; Hammond, Peter R.
PA United States Dept. of Energy, USA
SO U.S., 7 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C07D215-20
NCL 548469000
CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 27, 73
FAN.CNT 1

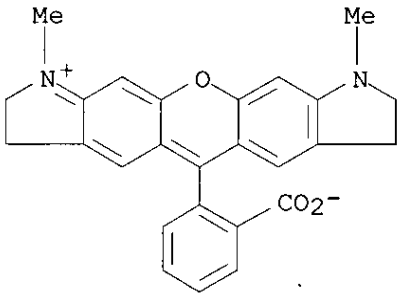
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 5256799	A	19931026	US 1992-913084	19920714
PRAI US 1992-913084		19920714		

OS MARPAT 120:56690
GI



AB The indolines I (R = H, lower alkyl), useful in the synthesis of rhodamine dyes for laser applications, are prepared by nitrating PhCH2CH2OAc, deacetylating, reducing the nitro groups, and treating with strong aqueous acid, followed by alkylation if desired.
ST hydroxyindoline intermediate rhodamine dye
IT Dyes
(laser, intermediates, hydroxyindolines, preparation of)
IT 512-56-1, Trimethyl phosphate
RL: RCT (Reactant); RACT (Reactant or reagent)

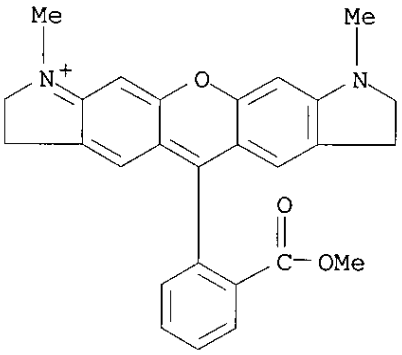
(hydroxyindoline alkylation by)
IT 7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses
10035-10-6, Hydrobromic acid, uses
RL: USES (Uses)
(in conversion of (diaminophenyl)ethanol to hydroxyindoline)
IT 75-75-2, Methanesulfonic acid 1493-13-6, Trifluoromethanesulfonic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(in conversion of (diaminophenyl)ethanol to hydroxyindoline)
IT 103-45-7, Phenethyl acetate
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of)
IT 4770-37-0P, 6-Hydroxyindoline 7556-21-0P, N-Methyl-6-hydroxyindoline
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with phthalic anhydride)
IT 4836-69-5P, 2-(2,4-Dinitrophenyl)ethanol
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reduction of)
IT 14572-93-1P, 2-(2,4-Diaminophenyl)ethanol 15918-79-3P, 6-Aminoindoline
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation and treatment with strong aqueous acid)
IT 62432-39-7P **151985-87-4P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)
IT 151985-86-3P **151985-89-6P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as laser dye)
IT 85-44-9, Phthalic anhydride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyindolines)
IT **151985-87-4P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)
RN 151985-87-4 HCAPLUS
CN 1H-Pyrano[3,2-f:5,6-f']diindolium, 5-(2-carboxyphenyl)-2,3,7,8-tetrahydro-1,9-dimethyl-, inner salt (9CI) (CA INDEX NAME)



IT **151985-89-6P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as laser dye)
RN 151985-89-6 HCAPLUS
CN 1H-Pyrano[3,2-f:5,6-f']diindolium, 2,3,7,8-tetrahydro-5-[2-(methoxycarbonyl)phenyl]-1,9-dimethyl-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

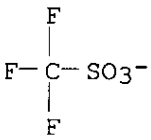
CM 1

CRN 151985-88-5
CMF C27 H25 N2 O3



CM 2

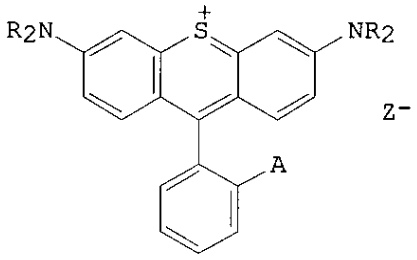
CRN 37181-39-8
CMF C F3 O3 S



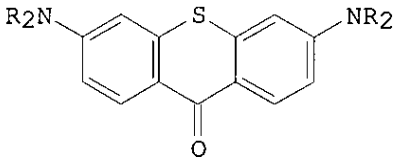
L9 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:138909 HCAPLUS
DN 112:138909
ED Entered STN: 13 Apr 1990
TI Preparation of thiorhodamines as antitumor agents and fluorescent dyes
IN Chen, Chin Hsin; Fox, John Leonard
PA Eastman Kodak Co., USA
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C07D335-12
ICS C07D413-10
CC 27-13 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 41
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 330444	A2	19890830	EP 1989-301705	19890222
	EP 330444	A3	19900905		
	R: BE, CH, DE, FR, GB, LI, NL, SE				
	AU 8930082	A1	19890824	AU 1989-30082	19890217

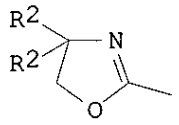
	DK 8900793	A	19890823	DK 1989-793	19890221
	JP 01254771	A2	19891011	JP 1989-39470	19890221
	FI 8900846	A	19890823	FI 1989-846	19890222
	NO 8900761	A	19890823	NO 1989-761	19890222
PRAI	US 1988-158412		19880222		
OS	MARPAT 112:138909				
GI					



I



II



Q

AB Title compds. I (A = CO2R1; R, R1 = H, C1-5 alkyl; Z = anion) are prepared from a thioxanthone II and 2-QC6H4Li (R2 = C1-5 alkyl) via I (A = Q; as a tautomer where the charge is on one of the N's). Treatment of I (R = Me, A = Q wherein R2 = Me, Z = BF4) (preparation given) with HCl (g) in MeOH gave the corresponding carboxylic acid, which was esterified with HCl/MeOH to give the thioxanthium chloride I (R = Me, A = CO2Me, Z = Cl). The latter showed an IC50 of 0.81 μM against A549 human lung carcinoma, vs. ≥12.5 μM for rhodamine 123.

ST thiorhodamine prepn antitumor agent dye

IT Neoplasm inhibitors
(thiorhodamines)

IT Dyes
(fluorescent, thiorhodamines)

IT 32664-13-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(lithiation of)

IT 7030-99-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, thioxanthone from)

IT 7031-01-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation of, with oxazolinylphenyllithium)

IT 66464-21-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and condensation of, with thioxanthone)

IT **125743-87-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and esterification of)

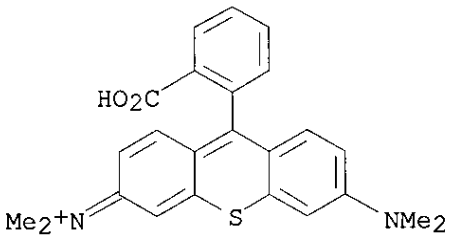
IT 125743-85-3DP, salts 125743-86-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)
(preparation and hydrolysis of, carboxylic acid from)

IT **125743-83-1P** 125743-84-2DP, salts
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as antitumor agent and dye)

IT **125743-87-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and esterification of)

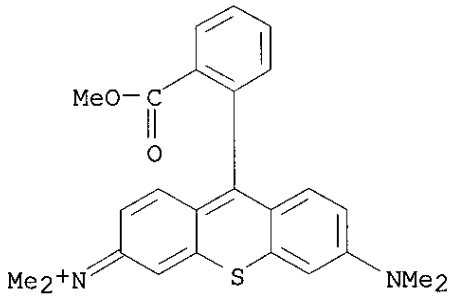
RN 125743-87-5 HCAPLUS
CN Methanaminium, N-[9-(2-carboxyphenyl)-6-(dimethylamino)-3H-thioxanthen-3-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

IT **125743-83-1P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as antitumor agent and dye)

RN 125743-83-1 HCAPLUS
CN Methanaminium, N-[6-(dimethylamino)-9-[2-(methoxycarbonyl)phenyl]-3H-thioxanthen-3-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl⁻

L9 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1979:475084 HCAPLUS
DN 91:75084
ED Entered STN: 12 May 1984

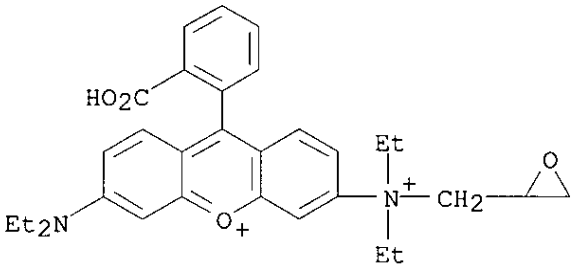
TI Glycidyl group-containing dye polymers
IN Shigehara, Kiyotaka; Tsuchida, Eishun
PA Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C08G065-08
CC 35-3 (Synthetic High Polymers)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54048897	A2	19790417	JP 1978-111526	19780911
	JP 60008010	B4	19850228		
PRAI	JP 1978-111526		19780911		

AB Coloring materials having glycidyl groups are polymerized to give polymers having coloring groups. Thus, a mixture of 0.392 g 7-glycidylamino-3-imino-3H-phenothiazine-HCl, 100 mL Me2SO, and 1 mL of 10% BF3 in Et2O, was stirred in a sealed tube at 60° for 6 h to give 0.102 g polymer [65544-58-3] having reduced viscosity 0.12 d L/g (30°, 0.1 g/17 mL Me2SO).
ST glycidyl group dye polymer; glycidylthionine polymer
IT 65544-10-7P 65544-12-9P 65544-14-1P 65544-15-2P 65544-17-4P
65544-18-5P 65544-20-9P **65544-22-1P 65544-23-2P**
65544-25-4P 65544-51-6P 65544-53-8P 65544-54-9P 65544-56-1P
65544-57-2P 65544-58-3P 65587-55-5P 71092-19-8P 71092-20-1P
RL: PREP (Preparation)
(preparation of colored)
IT 61-73-4 81-88-9 135-59-1 482-89-3 548-62-9 573-58-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with epichlorohydrin)
IT 106-89-8, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with iminophenothiazinamine derivs.)
IT **65544-22-1P 65544-23-2P**
RL: PREP (Preparation)
(preparation of colored)
RN 65544-22-1 HCAPLUS
CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0
CMF C31 H36 N2 O4 . 2 Cl

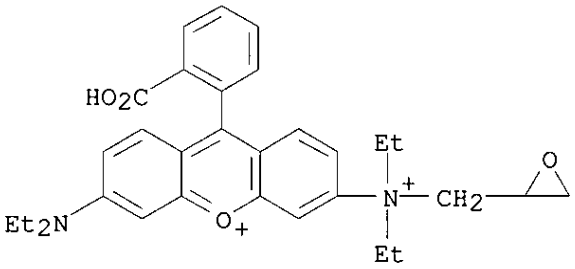


●2 Cl⁻

RN 65544-23-2 HCAPLUS
CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

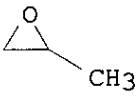
CRN 65544-21-0
CMF C31 H36 N2 O4 . 2 Cl



●2 Cl⁻

CM 2

CRN 75-56-9
CMF C3 H6 O

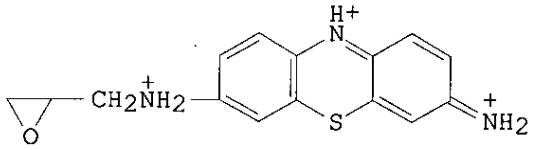


L9 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1978:426022 HCAPLUS

DN 89:26022
ED Entered STN: 12 May 1984
TI Glycidyl group-containing monomeric and polymeric dyes
IN Shigehara, Kiyotaka; Tsuchida, Hidetoshi
PA Japan
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC C09B057-00
CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52121038	A2	19771012	JP 1976-36986	19760403
	JP 60018701	B4	19850511		
PRAI	JP 1976-36986		19760403		

GI



3Cl⁻ III

AB Amino group-containing dyes were treated with epichlorohydrin (I) [106-89-8] or other glycidyl compds., and the resulting glycidyl group-containing dyes were homopolymd. or copolymd. with propylene oxide. For example, I and thionine (II) [581-64-6] in DMF were heated at 40° for 5 h in the dark and treated with HCl to give 47.3% violet black III [65544-09-4] which was homopolymd. in the presence of BF3.Et2O to give polymer with better lightfastness than II.

ST glycidyl dye polymer

IT Epoxy group
(dyes containing)

IT Quaternary ammonium compounds, uses and miscellaneous
RL: MSC (Miscellaneous)
(dyes, mono- and polymeric)

IT Crosslinking agents
(for polymeric dyes)

IT Polymerization
(of glycidyl group-containing dyes, in the presence of boron trifluoride etherate)

IT Dyes
(mono- and polymeric, glycidyl derivs.)

IT 108-77-0 111-50-2 629-03-8 7710-20-5 36182-48-6
RL: USES (Uses)
(crosslinking agents for reaction products from polyethylenimine and glycidy group-containing dyes)

IT 65544-09-4P 65544-11-8P 65544-13-0P 65544-16-3P 65544-18-5P
65544-21-0P 65544-24-3P 65544-52-7P 65544-55-0P
65620-28-2P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture and polymerization of)

IT 9002-98-6DP, reaction products with glycidyl group-containing dyes
65544-10-7P 65544-12-9P 65544-14-1P 65544-15-2P 65544-17-4P
65544-19-6P 65544-20-9P **65544-22-1P 65544-23-2P**
65544-25-4P 65544-51-6P 65544-53-8P 65544-54-9P 65544-56-1P
65544-57-2P 65544-58-3P 65587-55-5P 65684-17-5P 65684-18-6P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

IT 2224-15-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Azure B)

IT 2238-07-5 21739-14-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Azure B)

IT 106-89-8, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with dyes)

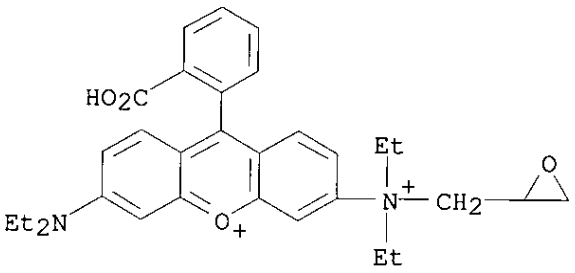
IT 61-73-4 81-88-9 482-89-3 548-62-9 573-58-0 581-64-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with epichlorohydrin)

IT 531-55-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with glycidyl compds.)

IT **65544-21-0P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture and polymerization of)

RN 65544-21-0 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride (9CI) (CA INDEX NAME)



●2 Cl^-

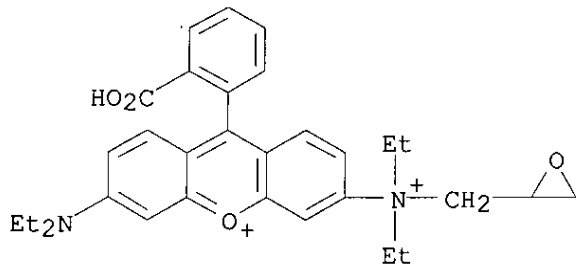
IT **65544-22-1P 65544-23-2P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of)

RN 65544-22-1 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0
CMF C31 H36 N2 O4 . 2 Cl

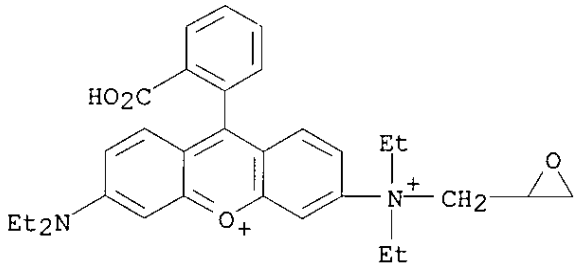


●2 Cl⁻

RN 65544-23-2 HCAPLUS
CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

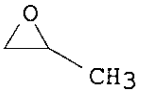
CRN 65544-21-0
CMF C31 H36 N2 O4 . 2 Cl



●2 Cl⁻

CM 2

CRN 75-56-9
CMF C3 H6 O



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